



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,334	08/20/2003	David S. Breed	ATI-336	6659

22846 7590 03/10/2005
BRIAN ROFFE, ESQ
11 SUNRISE PLAZA, SUITE 303
VALLEY STREAM, NY 11580-6170

EXAMINER

SWARTHOUT, BRENT

ART UNIT	PAPER NUMBER
----------	--------------

2636

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,334

Applicant(s)

BREED ET AL.

Examiner

Brent A Swarthout

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 37-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-8-03; 8-20-03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-36, drawn to an initial seat occupancy classification system which relies on new evidence to change classification, classified in class 340, subclass 436.
 - II. Claims 37-43, drawn to a seat classification algorithm with a repeated classification resulting in an empty seat and classification set to stable, classified in class 701, subclass 45.
 - III. Claims 44-47, drawn to a method of seat classification control including setting an algorithm in a transition state and if a first condition is satisfied setting algorithm in a revoking state, classified in class 280, subclass 735.
- a. Inventions I and II-III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because a seat occupancy method in group I would not have required stable classification setting or transition and revoking states as set forth in groups II and III. The subcombination has separate utility such as a method for determining if a system was stable or needed to have settings revoked.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

b. Claims 1-4, 15-16, 19-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al.

Lichtinger discloses a classification determining means for seat occupancy comprising initially classifying a seat (col.3, lines 30-31), periodically re-classifying seat occupancy (col.9, lines 43-57), and changing classification of seat occupancy when data indicates more likely new classification than old classification (col. 10, lines 1-16, 50-55).

Although Lichtinger doesn't specifically state that an algorithm is used, such would have been obvious to one in the seat classification art, since an algorithm is simply a combination of elements used to determine if a particular set of data meets a particular condition, which is the function provided by Lichtinger where weight sensor output and seating positions are taken into account to see if proper criteria are satisfied.

Regarding claims 2-3, since Lichtinger teaches that a number of consecutive readings must be identified before classification can be

changed, the consecutive period of time would have been the period of time that the consecutive readings were taken.

Regarding claim 16, Lichtinger uses weight sensor (abstract).

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Gillis et al.

Gillis discloses desirability of classifying seat occupancy based on output of door sensor (col. 16, lines 25-28; col.17, lines 1-2; abstract).

It would have been obvious to use door sensor as suggested by Gillis as an input for seat classification as disclosed by Lichtinger, in order to be able to reset a classification each time a door was opened indicating possibility of a new seat occupant condition.

5. Claims 10-11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Kamei et al.

Kamei teaches desirability of providing classification dependent on ignition on condition (col. 8, lines 61-67; abstract).

It would have been obvious to use ignition on as a criteria for providing seat classification in a system as disclosed by Lichtinger, since one of ordinary skill in the seat occupancy determination art would have recognized that turning ignition on as suggested by Kamei would have been indicative of a possible new seat occupancy configuration, since seating could change whenever a vehicle was started and new people occupied the vehicle.

6. Claims 12-14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Owechko et al.

Owechko teaches desirability of using a trained fuzzy network to determine seat occupancy status (abstract).

It would have been obvious to one of ordinary skill in the seat occupancy determination art to use trained fuzzy networks to determine seat occupancy in a system as disclosed by Lichtinger, in order to take into account many factors which could have affected the seat occupancy, without having to reprogram the detection system.

Choosing to use neural and modular neural networks would have been obvious since they are well-known types of fuzzy networks, applicant providing no criticality for use of these types of fuzzy networks versus the functionally equivalent fuzzy networks disclosed by Owechko.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Baloch et al.

Baloch teaches desirability of using camera to determine seat occupancy (col. 5, lines 13-16, 57-65).

It would have been obvious to use camera as suggested by Baloch to detect seat occupancy in a system as disclosed by Lichtinger, in order to provide an accurate seat occupancy determination with less likelihood of error since an optical image was used, which would have been less likely to provide incorrect data due to someone shifting weight in a seat.

8. Claims 8,9,18,21,25,26-30, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Wallace.

Wallace teaches desirability of providing seat classification after empty seat detection (col. 38, lines 23-29; abstract).

It would have been obvious to classify seat occupancy after a seat was vacated as suggested by Wallace in conjunction with a seat occupancy detection system as disclosed by Lichtinger, in order to provide new initial data when it was clear that an old classification had changed due to a seat being vacated.

Regarding claim 34, Wallace teaches use of weight sensing means (col. 38, line 46).

9. Claims 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Gillis et al. and Wallace.

Claims are rejected for the reasons as set forth above with regard to claims 5 and 18.

10. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Kamei et al. and Wallace.

Claim 31 is rejected for the reasons as set forth above with regard to claims 10 and 18.

11. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtinger et al. in view of Owechko et al. and Wallace.


Claim 32 is rejected for the same reasons as set forth above with regard to claims 12 and 18.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Corrado (411), Corrado (085), Drobny, Marchthaler and Krumm disclose vehicle occupant detection systems.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A Swarthout whose telephone number is 571-272-2979. The examiner can normally be reached on M-F from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Brent A Swarthout
Examiner
Art Unit 2636

**BRENT A. SWARTHOUT
PRIMARY EXAMINER**